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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/599,066	06/21/2000	Xin Xue	SONY-50N3535	6280

7590 11/18/2004  
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EXAMINER

BOCCIO, VINCENT F

ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 11/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/599,066	<b>Applicant(s)</b> XUE, XIN	
	<b>Examiner</b> Vincent F. Boccio	<b>Art Unit</b> 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 June 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 20 is/are rejected.
- 7) ☒ Claim(s) 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

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**DETAILED ACTION**

The Group and/or Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 2616.

**Response**

{A} Applicants states respectfully, "all independent claims 1, 7, 12, and 15 read on Fig. 9 ... and are supported by aspects of Fig. 9."

In response after a careful consideration the examiner believes that applicant statements are considered acceptable and correct after reviewing the specification, therefore, the primary examiner will examine all presented claims, even thou there exists varying scope and combinations of elements with respect to the independent claims.

**Claim Objections**

1. Claim 6 is objected to because of the following informalities:

{A} Claim 6 which depends from claim 1, recites, in the past tense, "the ordering constraints", since first introduced in claim 6,

the examiner recommends amending claim 6 to,

"ordering constraints", drop, "the".

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Appropriate correction is required.

**Claim Rejections - 35 USC § 102**

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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3. Claims 12 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Endsley et al. (US 6,005,613).

Regarding claims 12 and 14, Endsley discloses and meets the limitations associated with a missing application data patching method comprising:

- receiving a communication packet carrying application data (Fig. 1, "42 to 14 to 12");
- separating (video/image from header data);
- analyzing to determine if it complies with expected predefined data configuration and performing data patching for lost or missing data (col. 9, "sync word is used to indicate which image frame the data is from", "computer will know ... packets dropped ... old frame repeated", thereafter), forwarding the data for further processing (display or computer video conferencing, col. 3), wherein since the previous frame is used meets the limitation of the system is predetermined to utilize {application default data}, by always using the previous or old frame (actual video or frame), in place of the corrupted or not completely received image or video frames, wherein it is considered met, that the frame ID for the missing frame or frame number would not be for the old frame, but, for the current frame, in order to ID the frame as a successive frame.

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**Claim Rejections - 35 USC § 103**

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time

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any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

5. Claim 1-8, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endsley et al. (US 6,005,613).

Regarding claim 1-2, Endsley discloses and meets the limitations associated with a digital video computer system comprising:

- a bus (Fig. 1, "USB 42");
- a digital video camera (met by the combination of "18, 20, 24, and 26", of "22", since provides digital images is a digital camera);
- a processor for determining and patching missing video, coupled to the bus (met by, col. 9, lines 25-36, "current frame has been dropped ... old frame will be repeated");
- a monitor (16).

Endsley mentions having associated audio (col. 3, lines 7-23, "audio as part of computer video conference"), but fails to disclose sound and a speaker coupled to the bus.

The examiner takes official notice that it is well known that cameras can be associated or have means for sound pickup or a microphone, further that computer systems are well known to have speakers for outputting audio, therefore, it would have been obvious to one skilled in the art, to have associated sound (pickup/microphone), associated with the camera images, connected/coupled to the bus and to provide a compute with at least one speaker for outputting sound associated with displaying images from the camera, as is considered obvious to those skilled in the art, thereby allowing for video with associated audio, for purposes of video conferencing or other, as is well known to those skilled in the art.

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Regarding claims 3 and 13, Endsley discloses a digital camera connected to a computer thru a bus

but, fails to disclose wherein the is connected using IEEE 13894, bus standard, therefore, "encapsulating video in communication packets compliant with the standard.

The examiner takes official notice that the IEEE 1394 standard is well known and in the process of transferring video and audio from various types of cameras connected to computers thru Firewire, known and obvious viable standard to transfer between devices and computers or other, therefore, it would have been obvious to one skilled in the art at the time of the invention to substitute the IEEE 1394 bus, with the bus used in view of being a viable, available means to transfer video and audio information, as is obvious and well known to those skilled in the art.

Regarding claim 4, the combination as applied with Endsley is deemed to meet the limitations as recited wherein the processor or computer with digital interface,

- separates video from the received packets (IEEE 1394 or USB, met by video with headers and other data etc., in order to determine missing and perform repeats, see above), thereby determining by analyzing packets based on the configuration, the data structure known to the digital interface (1394/USB), decoding means computer processing software {or a driver}, Endsley, determines and patches missing video frames, by repeating previous video frames, thereby detecting and patching the missing video, in the that the video does not properly follow previous received (successive video frames), video frames (col. 9, "sync word is used to indicate which image frame the data is from ... the computer will known that one of the packets of the current frame has been dropped").

Regarding claim 5, Endsley patches missing frames by repeating and therefore, it is deemed based on the claim language used the previous frame can be considered "inserting appropriate default information", met by the previous frame, therefore, upon missing video information the appropriate default is met by defaulting to the previous frame received.

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Claim 6 had been analyzed and discussed with respect to the claims above, wherein (one of blocks or segments), of video information is missing, met by missing video data packets.

Claims 7-8 are analyzed and disclosed with respect to the claims above, the combination as applied above, provides for a computer which receives images/video, thru a bus, from a means to capture (camera), means for processing (col.9), means for displaying (16) and means for transmitting audio (computer to speaker or teleconference A/V), met by prior art as applied above.

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Endsley et al. (US 6,005,613), as applied above, in view of Kobayashi et al. (US 6,144,411).

Regarding claim 9, Endsley fails to disclose video in DIF blocks and wherein in real time video data transfer or communications packets (DATA STRUCTURE), having

- a constant number of DIF blocks, which the first would represent an integer number utilized to predict a expected next sequential packet.

Kobayashi teaches a data structure of image and voice from a digital camera (Fig. 1), to a computer and other devices (Fig. 15), utilizing a 1394 interface, wherein the data structure provides for a constant number of DIF blocks (col. 8, "150 DIF blocks form one DIF sequence and 10 DIF sequences form one frame of image and voice data", "250 packets form one frame"), as taught by Kobayashi.

Therefore, it would have been obvious to one skilled in the art at the time of the invention to utilize 1394, bus standard and have a data structure for video and/or voice, corresponding to a constant number of DIF blocks for formatting an A/V signal for transmission on 1394, as taught by Kobayashi, as being a conventional feature in accord to at least the 1394 standard.

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7. Claims 10-11 and 15-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Endsley et al. (US 6,005,613) and Kobayashi et al. (US 6,144,411), as applied above, and further in view of in view of Wilkinson (US 4,626,912).

Regarding claim 10, the combination as applied fails to address or disclose predicting a DIF block ID, expected, in a next communication packet.

Wilkinson teaches the basis concept of predicting col. 4, lines 28-, "predicting from each incoming block number what the next block number should be, by adding one to the preceding block number ... compared with the actual to check for equality. Additionally each line number is compared ... each segment ... ", as taught by Wilkinson.

Therefore, it would have been obvious to one skilled in the art at the time of the invention to perform predictions of next sequential communication packets, as taught by Wilkinson, in order to equality or predict and dictate proper sequential information for proper processing of the information, which would inherently detect missing/corrupted data, according to col. 1, having advantages of minimizing or removing degradation of the TV signals, by performing a prediction of next data to control processing of that data, as understood.

Regarding claim 11, the combination detects and replaces missing frames, predicts next data, with a data structure corresponding to video and audio in a IEEE 1394 format or data structure, but, the combination fails to address,

- filling for missing in a patch operation
- sequence number bits;
- a reserved bit;
- a DIF sequence number bits;
- DIF block number bits;
- Section type bits of a DV packet (digital camera packet), is missing (frame or block or segment);
- including values calculated to provide expected values based upon ordering constraints of predetermined video information configuration requirements.

Based on the combination, conforming to 1394 having the recited data structures based on the combination, it is deemed further obvious that when the data structure includes the recited elements above and a segment or video



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frame is corrupted, which is replaced with the previous (taught by Endsley), in combination with the 1394 data structures deemed to be conventional and well known, it is further obvious to predict expected values such as for a next frame, replace video information with previous, but, would also be inherent if not obvious in view of Endsley, that the block numbers/Ids, frame number, would be obvious to further use the predicted Ids, not found {Wilkinson} in a data structure corresponding to 1394 (Kobayashi) and to replace the video with the previous but identify the frame in accord to the present frame Id or Ids as predicted, as is deemed obvious with the prior art as understood.

Claims 15-16 are analyzed and discussed with respect to the prior art combination as applied above.

Regarding claims 17-18 and 20, the combination fails to particularly disclose the data structure comprising:

- a data length, tag section, channel section, Tcode section, Sy section, a header CRC section and a data CRC section.

The examiner takes official notice that the recited data structure of recited elements, as being conventional to IEEE 1394, standard for coding video or images in the encapsulating process to communicate video from a device such as a camera to a computer using the 1394 standard, therefore, upon using this data structure it is further obvious to removing or separating the data to allow for utilization of the data in the data structure as is considered to be obvious to those skilled in the art, further obvious to check to ascertain if section type bits and sequence bits are logical zeroes, when the data structure indicates that is what to expected, as is also obvious to one skilled in the art.

#### ***Allowable Subject Matter***

1. Claim 19 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art fails to teach, disclose or fairly suggest, claim 19 in combination elements of claim 15,

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- wherein the prior art of record and the examiner's understanding of the art, fails to teach or suggest the step of: retrieving a quantization value from an audio auxiliary (AAUX) field in an A3 Dif block of sequence number zero if a received DIF sequence value equals zero, it is an audio section and a Dif block number is set to equal 0x03.

**Contact Fax Information**

Any response to this action should be mailed to:  
Commissioner of Patents and Trademarks  
Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for formal communication intended for entry)

or:

(703) 308-5359, (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

**Contact Information**

Any inquiry concerning this communication or earlier communications should be directed to the examiner of record, Monday-Thursday, 8:00 AM to 5:00 PM Vincent F. Boccio (703) 306-3022.

Any inquiry of a general nature or relating to the status of this application should be directed to Customer Service (703) 306-0377.

Primary Examiner, Boccio, Vincent  
11/15/04

  
VINCENT BOCCIO  
PRIMARY EXAMINER